

ABSTRACT

A communication system including an infrared receiver that receives optical infrared signals. The infrared receiver utilizes an array of photo-sensors for detecting optical infrared signals within a solid angle. Each photo-sensor, however, detects optical infrared signals in only a predetermined portion of the solid angle. On detecting optical infrared signals, each photo-sensor converts and forwards a corresponding electrical signal to a filter circuit that selectively determines whether the signal meets a predetermined criteria such as a frequency threshold. The filter circuit or other processing circuitry is thereby able to identify photo-sensor(s) providing an optimal infrared communication link. The infrared receiver may include an optical system comprising a lens assembly that directs the optical infrared signals towards the array of photo-sensors. In one embodiment, the lens assembly employs a diffused lens having an imperfect focus to facilitate the detection of optical infrared signals emanating from transmitters that have a relatively small solid angle.

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